**Smart Pet Feeder – Setup Guide**

This guide will help you set up the Smart Pet Feeder, which uses AI and IoT technology to ensuring your pets receive timely, controlled portions even when you're not home. It provides convenience, improves pet health, and offers peace of mind through remote monitoring and scheduling.

**Components and Tools Required**

**Hardware :**

* Raspberry Pi
* Arduino
* Stepper motor
* Connection wires
* Power Supply
* Mobile app or any cloud platform.

The IoT kit provided by Xtrans Solution provides you the raspberry pi and Arduino models along with necessary sensors for the project.

**Software :**

* Python(3.10 or 3.11)
* Other python libraries(will be mentioned in installation)
* VS Code on laptop and Raspberry Pi OS on raspberry Pi

1. **Setting up the code provided in Zip file**

* **Download and Extract the Zip File**:

First, download the zip file containing the code for the Smart Pet Feeder and extract its contents to a folder on your computer.

* **Install Required Software and Libraries**:

Ensure that you have the necessary development environment set up (e.g., Arduino IDE, Python, or any other relevant platform depending on the code).

Install the required libraries or dependencies by following the instructions in the README file, if provided. This might include libraries for Wi-Fi connectivity, motor control, sensors, or the specific IoT platform used.

* **Connect Hardware**:

Physically connect the hardware components, such as the servo motor for food dispensing, the Wi-Fi module (e.g., ESP8266/ESP32), sensors (if any), and the pet food container, to your microcontroller as per the provided wiring diagram.

* **Upload the Code**:

Open the relevant code file (e.g., .ino for Arduino, .py for Python) in the appropriate software (e.g., Arduino IDE for Arduino-based projects).

Select the correct board and port in the IDE, then upload the code to your microcontroller.

* **Configure Wi-Fi and Settings**:

If the feeder requires internet connectivity, open the code and enter your Wi-Fi credentials (SSID and password) where indicated. You might also need to adjust settings for the pet's feeding schedule or food portion sizes in the code.

* **Test the System**:

Once the code is uploaded and the system is connected, test the pet feeder by manually triggering a feed cycle or using the app (if applicable) to ensure it dispenses food correctly at the scheduled times.

* **Debug (in needed)** :

If any issues arise during setup, use serial prints or error logs to troubleshoot connectivity issues, hardware malfunctions, or code errors.



